

Technical Data for Pascal-Series Pressure Controllers

800 TorrA full scale. Designed for diamond manufacturing.

Standard specifications. Consult Alicat for available options.



+1 (888) 290-6060
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SENSOR AND CONTROL PERFORMANCE	
Pressure accuracy ¹	Standard accuracy: $\pm 0.25\%$ of full scale High-accuracy option: $\pm 0.125\%$ of full scale
Pressure repeatability (2 σ)	$\pm 0.08\%$ of full scale
Steady state control range	0.01–100% of full scale (10,000:1 turndown ratio)
Temperature sensitivity	Zero shift: 0.02% full scale per °C from tare temperature ² Span shift: 0.02% full scale per °C from calibration temperature
Temperature range	–10–60°C (ambient and gas)
Valve function	Normally closed
Sensor response time	<1 ms
Typical control response time	As fast as 30 ms (T63), flow rate dependent, user-adjustable
Typical indication response time	<10 ms
Typical warm-up time	<1 s

¹ After tare under equilibrium conditions. (Tare not available without the optional integrated barometer.) Includes repeatability and linearity.

² Tare not available without the optional integrated barometer.

MECHANICAL	
Process connections	¼" VCR®
Wetted materials	302, 303, 304, 316L, and 430FR stainless steel; FKM, alumina ceramic, brass, glass, gold, heat-cured epoxy, heat-cured silicone rubber, polyamide, and silicon
Maximum pressure	3× full scale range
Relative humidity range	0–95%, non-condensing
Ingress protection	IP40
Leak integrity, external	<1×10 ⁻⁹ atm-cc/sec of helium
Leak integrity, through closed valve	<1×10 ⁻⁵ atm-cc/sec of helium
Mounting orientation sensitivity	None
Mounting holes	2× 8-32 UNC \downarrow 0.328" [8.33 mm]

POWER AND COMMUNICATION	
Digital input and output options	RS-232 Serial and Modbus RTU (default), RS-485 Serial and Modbus RTU, Modbus TCP/IP, DeviceNet, EtherCAT, EtherNet/IP, PROFINET, PROFIBUS
Digital data update rate ³	40 Hz at 19200 Baud
Analog input and output options	4–20 mA, 0–5 Vdc, 1–5 Vdc, 0–10 Vdc
Analog data update rate ³	1 kHz
Analog signal accuracy	$\pm 0.1\%$ of full scale additional uncertainty
Interactive display	Monochrome LCD or color TFT display with integrated touchpad; simultaneously displays setpoint and pressure
Display update rate	10 Hz
Electrical connection options	DB-9, DB-15, 8-pin M12, 6-pin locking, 8-pin mini-DIN
Power requirements ³	12–24 Vdc, 250 mA (290 mA if equipped with 4–20 mA output)

³ Consult the individual operating bulletins for specific industrial protocol power requirements and data transmission specifications.

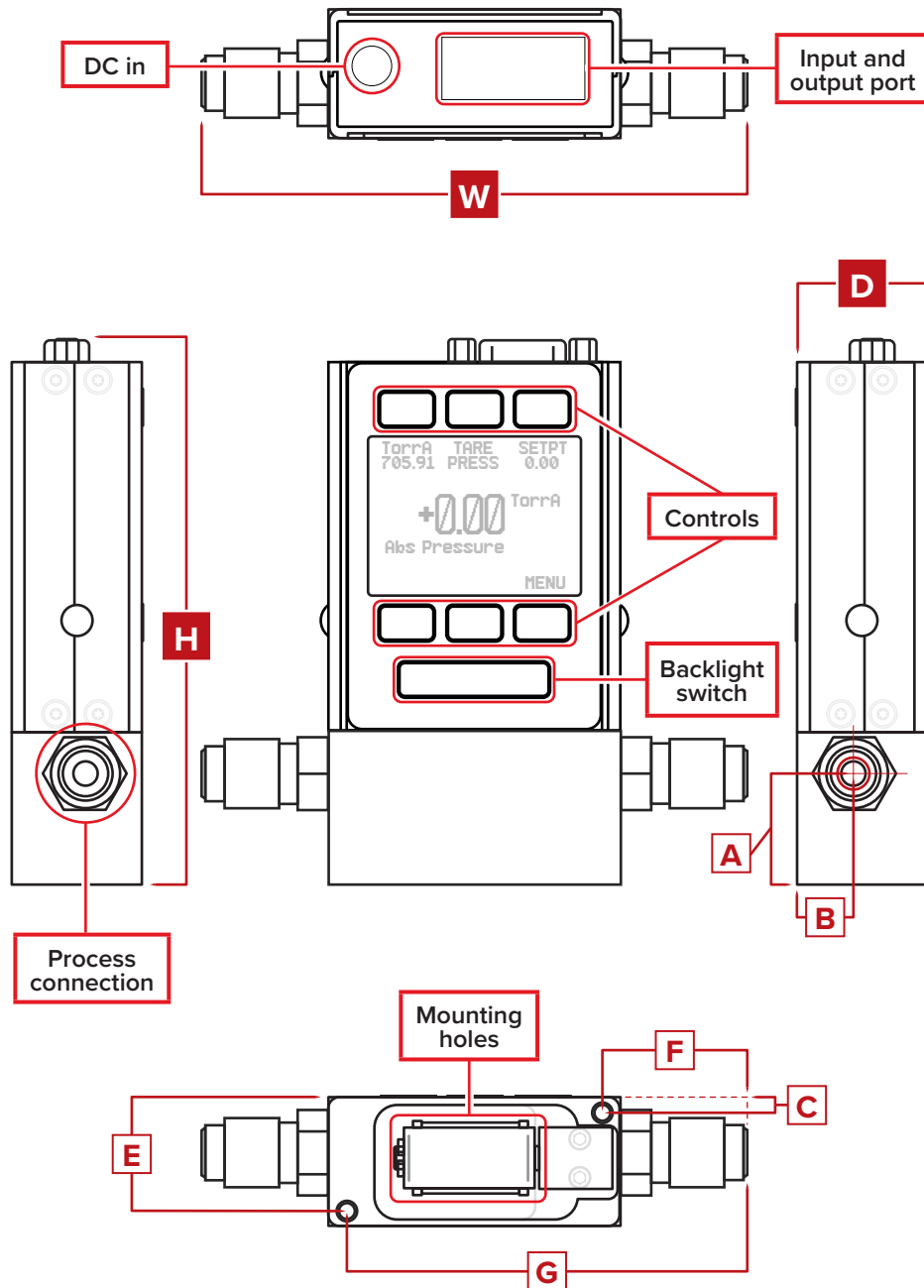
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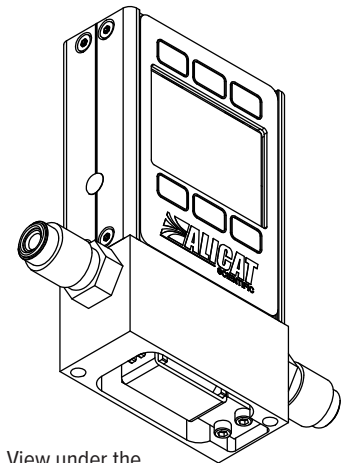
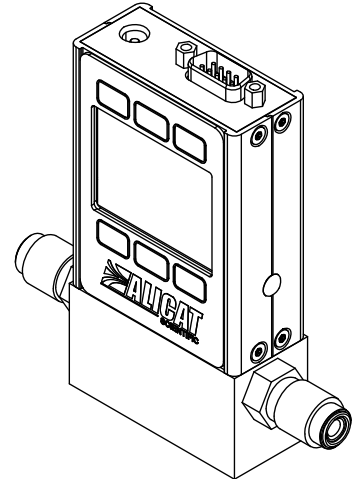
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Representative Example



View under the device, showing the valve

DIMENSIONS									WEIGHT
Width	Depth	Height	A	B	C	E	F	G	
4.44"	1.05"	4.43"	0.90"	0.45"	0.13"	0.93"	1.18"	3.26"	≈ 1.0 lb
112.9 mm	26.7 mm	112.5 mm	22.9 mm	11.4 mm	3.2 mm	23.5 mm	30.0 mm	82.8 mm	≈ 0.5 kg